

I CLAIM:

1. A method of reducing multipath interference in a wireless data transmission, the method comprising the steps of:-

(a) capturing a plurality of data packets associated with the wireless data

5 transmission, each of the data packets being associated with a time value, and wherein some of the data packets being captured are non-reflective packets and some are reflective packets;

(b) determining whether each captured data packet is reflective or non-reflective by:

comparing the time value of the captured data packet to the time value of each stored non-reflective packet;

identifying the captured data packet as non-reflective, when the time value of the captured packet is different from the time value of each stored non-reflective packet; and

identifying the captured data packet as reflective, when time value of the captured packet is identical to the time value of any stored non-reflective packet; and

(c) repeating the determining step for each subsequently captured data packet.

2. The method of claim 1, further comprising the step of storing each non-reflective data packet in a separate memory partition.

3. The method of claim 2, further comprising the step of aggregating the reflective data packet in the memory partition that stores the non-reflective data packet for which the
20 reflective packet is reflective.

4. The method of claim 1, wherein, in said determining step, the time value of the captured data packet is sequentially compared to the time value of each stored non-reflective data packet.

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5. The method of claim 1, wherein, in the determining step, the time value of the captured data packet is substantially simultaneously compared to the time value of each stored non-reflective data-packet.

6. The method of claim 1, further comprising the step of deleting each captured data packet identified as reflective.

7. The method of claim 1, wherein the time value is coded in a bit format.

8. The method of claim 1, wherein the time value is modulated as part of a carrier signal associated with the wireless data transmission.

9. The method of claim 1, wherein a spatial value is associated with each data packet of the wireless data transmission and further comprising in the determining step, prior to comparing the respective time values:

comparing the spatial of the captured data packet to the spatial value of each stored non-reflective packet; and

identifying the captured data packet as non-reflective, if the spatial value of the captured packet is different from the spatial value of each stored non-reflective packet.

10. The method of claim 9, further comprising the step of analyzing the respective spatial values of the stored non-reflective data packets such that a movement vector can be calculated.

11. A method of reducing multipath interference in a wireless data transmission being comprised of a plurality of data packets, each of the data packets being associated with a time value, the method comprising:

(a) storing a first received data packet of the data transmission in a first memory partition;

(b) comparing the time value of a second received data packet with the time value of the first received data packet;

~~-----~~(d)~~-----~~ designating the second received data packet as reflective, if the respective time values of the first and second received data packets are identical, or designating the second received data packet as non-reflective, if the respective time values of the first and second received data packets are different;

(e) comparing the time value of a third received data packet with the respective time values of the first and second received data packets; and

(f) designating the third received data packet as reflective, when the time values of either the first and third received data packets or second and third received data packets are identical, and designating the third received data packet as non-reflective, when the time values of both the first and second received data packets are different from the time value of the third received data packet.

12. The method of claim 11, wherein a spatial value is associated with the data packets of the data transmission and the method further comprises:

sequentially comparing the spatial value of subsequently received data packets of the data transmission to the respective spatial values of previously stored non-reflective data packets to determine whether the subsequently received data packets are non-reflective or reflective.

13. A system for reducing multipath interference, comprising:

a receiver adapted to be in wireless communication with a transmitter so as to enable the receiver to capture data packets of a wireless data transmission, the transmitter

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associating each of the data packets of the wireless data transmission with a time and spatial value;

_____ a memory interconnected with the receiver to store the data packets; and
a processor interconnected with at least the memory;

5 wherein the processor is operative with programming to iteratively compare the time and spatial values of each captured data packet to the respective time and spatial values of each stored data packet that is non-reflective, such that the processor can determine whether each captured data packet is reflective or non-reflective.

14. The system of claim 13, wherein the memory comprises a plurality of memory partitions and wherein each data packet determined to be non-reflective is stored in a separate one of the memory partitions.

15. The system of claim 14, wherein each data packet determined by the processor to be reflective is matched to a corresponding one of the non-reflective data packets and aggregated in the memory partition that stores the matched non-reflective data packet.

16. The system of claim 13, wherein each data packet determined to be reflective is destroyed by the processor.

17. The system of claim 13, wherein the time value is coded in a bit format.

18. The system of claim 13, wherein the time value is modulated as part of a carrier signal associated with the wireless data transmission.

20. ¹⁹ The method of claim 13, wherein the processor analyzes the respective spatial values of the stored non-reflective data packets such that movement of the transmitter relative to the receiver can be monitored.

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